Brian Ricker

FAX COVER SHEET **Date: July 1, 1996**

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Number of Pages: 18 **(including this cover page)**

If this FAX was not received correctly, please call: 303/442-7367

MESSAGE:

Last fax before the July 8 meeting. You should find a meeting summary and the 1990 emissions numbers.

See you on the 8th.

1990 Ozone Season Daily Emissions for the Pennsylvania Counties in the Philadelphia NAA
Tier 2 Source Category Summary

Source Category	Daily Emissions (tons/day) VOC	NOx	CO
FUEL COMB. ELEC. UTIL.	**1.0**	**74.2**	**6.1**
Coal	0.2	38.8	1.5
Oil	0.5	25.6	3.1
Gas	0.0	5.1	0.4
Other	0.0	0.4	0.0
Internal Combustion	0.3	4.4	1.1
FUEL COMB. INDUSTRIAL	**0.8**	**76.0**	**9.3**
Coal	0.0	4.8	0.1
Oil	0.0	10.3	0.9
Gas	0.3	42.8	5.2
Other	0.0	0.7	0.0
Internal Combustion	0.5	17.4	3.1
FUEL COMB. OTHER	**1.0**	**26.8**	**5.8**
Commercial/Institutional Coal	0.0	0.8	0.0
Commercial/Institutional Oil	0.3	10.9	2.6
Commercial/Institutional Gas	0.7	13.6	2.7
Misc. Fuel Comb. (Except Residential)	0.0	0.7	0.2
Residential Other	0.0	0.9	0.3
CHEMICAL & ALLIED PRODUCT MFG	**14.8**	**0.1**	**0.0**
Organic Chemicals	8.8	0.0	0.0
Inorganic Chemicals	0.1	0.1	0.0
Polymers & Resins	0.7	0.0	0.0
Paints, Varnishs, Lacquers, Enamels	1.6	0.0	0.0
Pharmaceuticals	0.8	0.0	0.0
Other Chemicals	2.8	0.0	0.0
METALS PROCESSING	**0.6**	**1.5**	**36.0**
Non-Ferrous Metals Processing	0.2	0.0	0.0
Ferrous Metals Processing	0.5	1.5	36.0
PETROLEUM & RELATED INDUSTRIES	**21.5**	**10.0**	**17.9**
Petroleum Refineries & Related Industries	21.2	9.8	17.7
Asphalt Manufacturing	0.3	0.2	0.2
OTHER INDUSTRIAL PROCESSES	**2.3**	**2.8**	**0.6**
Agriculture, Food, & Kindred Products	1.5	0.0	0.0
Wood, Pulp & Paper, & Publishing Products	0.1	0.0	0.0
Rubber & Miscellaneous Plastic Products	0.6	0.0	0.0
Mineral Products	0.0	2.8	0.6
Machinery Products	0.1	0.0	0.0
Miscellaneous Industrial Processes	0.0	0.0	0.0
SOLVENT UTILIZATION	**223.4**	**0.0**	**0.0**
Degreasing	15.9	0.0	0.0
Graphic Arts	20.7	0.0	0.0
Dry Cleaning	0.8	0.0	0.0
Surface Coating	147.5	0.0	0.0
Other Industrial	3.2	0.0	0.0
Nonindustrial	35.4	0.0	0.0

1990 Ozone Season Daily Emissions for the Pennsylvania Counties in the Philadelphia NAA
Tier 2 Source Category Summary

Source Category	Daily Emissions (tons/day) VOC	NOx	CO
STORAGE & TRANSPORT	**46.2**	**0.0**	**0.0**
Bulk Terminals & Plants	0.7	0.0	0.0
Petroleum & Petroleum Product Storage	4.7	0.0	0.0
Petroleum & Petroleum Product Transport	14.4	0.0	0.0
Service Stations: Stage I	4.2	0.0	0.0
Service Stations: Stage II	19.6	0.0	0.0
Service Stations: Breathing & Emptying	1.7	0.0	0.0
Organic Chemical Storage	0.4	0.0	0.0
Organic Chemical Transport	0.6	0.0	0.0
WASTE DISPOSAL & RECYCLING	**22.0**	**1.7**	**6.5**
Incineration	1.6	1.6	5.3
Open Burning	0.2	0.1	-1.2
POTW	7.8	0.0	0.0
TSDF	12.3	0.0	0.0
Landfills	0.2	0.0	0.0
HIGHWAY VEHICLES	**187.9**	**158.3**	**1710.8**
Light-Duty Gas Vehicles & Motorcycles	167.7	122.9	1503.8
Light-Duty Gas Trucks	14.8	12.4	161.6
Heavy-Duty Gas Vehicles	2.4	2.2	35.0
Diesels	3.0	20.8	10.3
OFF-HIGHWAY	**88.1**	**99.5**	**732.6**
Non-Road Gasoline	69.9	9.0	658.4
Non-Road Diesel	9.8	66.7	44.8
Aircraft	7.2	8.2	27.1
Railroads	1.1	15.6	2.3
MISCELLANEOUS	**2.3**	**0.3**	**12.6**
Other Combustion	2.3	0.3	12.6
TOTAL	**612.0**	**451.2**	**2538.0**

1990 Ozone Season Daily VOLATILE ORGANIC COMPOUND Emissions for the Philadelphia NAA

Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
FUEL COMB. ELEC. UTIL.	**1.0**	**8.1**
Coal	0.2	3.9
Oil	0.5	1.1
Gas	0.0	0.3
Other		0.0
Internal Combustion	0.3	2.8
FUEL COMB. INDUSTRIAL	**0.8**	**4.3**
Coal	0.0	0.0
Oil	0.0	1.4
Gas	0.3	2.3
Other	0.0	0.0
Internal Combustion	0.5	0.5
FUEL COMB. OTHER	**1.0**	**1.9**
Commercial/Institutional Oil	0.3	0.5
Commercial/Institutional Gas	0.7	0.8
Misc. Fuel Comb. (Except Residential)	0.0	0.1
Residential Wood	0.0	0.5
woodstoves		0.2
other		0.3
Residential Other	0.0	0.2
CHEMICAL & ALLIED PRODUCT MFG	**14.8**	**52.6**
Organic Chemical Mfg	8.8	16.0
ethylene oxide mfg		0.0
phenol mfg	6.6	6.6
terephthalic acid mfg	1.4	1.4
ethylene mfg		0.4
charcoal mfg	0.5	0.5
socmi reactor	0.3	0.8
socmi distillation		0.1
socmi air oxidation processes		0.0
socmi fugitives		2.1
other	0.1	4.2
Inorganic Chemical Mfg	0.1	1.6
Polymer & Resin Mfg	0.7	2.9
polypropylene mfg		0.2
polyethylene mfg	0.5	0.6
polystyrene resins		0.0
synthetic fiber		0.3
styrene/butadiene rubber	0.0	0.5
other	0.2	1.2
Agricultural Chemical Mfg		0.0
Paint, Varnish, Lacquer, Enamel Mfg	1.6	1.6
paint & varnish mfg	1.0	1.0
other	0.6	0.6
Pharmaceutical Mfg	0.8	1.1
Other Chemical Mfg	2.8	29.4
printing ink mfg	0.2	1.2
fugitives unclassified		2.3
other	2.6	25.9

1990 Ozone Season Daily VOLATILE ORGANIC COMPOUND Emissions for the Philadelphia NAA

Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
METALS PROCESSING	**0.6**	**1.7**
Non-Ferrous Metals Processing	0.2	0.4
Ferrous Metals Processing	0.5	1.3
Metals Processing NEC		0.0
PETROLEUM & RELATED INDUSTRIES	**21.5**	**31.5**
Petroleum Refineries & Related Indust	21.2	31.1
vaccuum distillation	1.6	1.6
cracking units	0.0	0.7
process unit turnarounds	0.1	1.5
petroleum refinery fugitives	12.5	13.3
other	7.1	14.0
Asphalt Manufacturing	0.3	0.4
OTHER INDUSTRIAL PROCESSES	**2.3**	**28.4**
Agriculture, Food, & Kindred Products	1.5	4.4
bakeries	0.4	1.3
other	1.2	3.1
Textiles, Leather, & Apparel Products		0.3
Wood, Pulp & Paper, & Publishing Prod	0.1	0.1
Rubber & Miscellaneous Plastic Produc	0.6	1.6
Mineral Products	0.0	0.2
Machinery Products	0.1	0.3
Electronic Equipment		0.4
Miscellaneous Industrial Processes	0.0	21.2
SOLVENT UTILIZATION	**223.4**	**351.0**
Degreasing	15.9	24.9
open top	0.2	0.5
conveyorized		0.7
cold cleaning	0.9	1.3
other	14.9	22.4
Graphic Arts	20.7	26.0
letterpress	0.2	0.2
flexographic	2.2	3.2
lithographic	0.6	0.9
gravure	11.5	12.0
other	6.2	9.7
Dry Cleaning	0.8	3.1
perchloroethylene		0.7
petroleum solvent	0.2	0.5
other	0.5	1.9
Surface Coating	147.5	223.9
industrial adhesives	0.9	1.2
fabrics	1.9	2.3
paper	23.9	24.8
large appliances	0.1	0.4
magnet wire		0.0
autos & light trucks	0.4	7.4
metal cans	8.9	18.4
metal coil	1.2	1.2
wood furniture	2.9	4.6

1990 Ozone Season Daily VOLATILE ORGANIC COMPOUND Emissions for the Philadelphia NAA

Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
metal furniture	7.2	9.7
flatwood products	0.5	1.1
plastic parts	0.3	0.5
large ships	0.3	1.1
aircraft	0.8	1.0
misc. metal parts	2.0	3.9
steel drums		0.0
architectural	30.5	49.3
traffic markings	2.6	5.1
maintenance coatings	4.1	6.7
railroad	0.1	0.2
auto refinishing	16.3	28.4
machinery	2.5	4.3
electronic & other electrical	0.3	0.7
general	2.7	5.9
miscellaneous	0.2	1.1
thinning solvents	1.1	1.1
other	35.9	43.5
Other Industrial	3.2	3.3
Nonindustrial	35.4	69.8
cutback asphalt		2.1
other asphalt		3.4
pesticide application	1.4	10.5
consumer solvents		19.7
other	34.1	34.1
STORAGE & TRANSPORT	46.2	90.2
Bulk Terminals & Plants	0.7	3.6
fixed roof		2.8
floating roof	0.2	0.2
efr with seals	0.0	0.0
ifr with seals		0.0
underground tanks		0.2
other	0.4	0.4
Petroleum & Petroleum Product Storag	4.7	12.2
floating roof gasoline	0.7	1.8
floating roof crude	0.3	0.3
efr / seal gasoline	0.0	3.9
efr / seal crude	0.1	0.2
ifr / seal gasoline	0.0	0.0
other	3.6	5.9
Petroleum & Petroleum Product Transp	14.4	31.1
gasoline loading: balanced / submerg	1.6	1.6
gasoline loading: normal / submerge	0.0	0.8
marine vessel loading: gasoline & cr	5.3	9.1
other	7.6	19.6
Service Stations: Stage I	4.2	7.0
Service Stations: Stage II	19.6	25.5
Service Stations: Breathing & Emptyin	1.7	3.1
Organic Chemical Storage	0.4	6.9

1990 Ozone Season Daily VOLATILE ORGANIC COMPOUND Emissions for the Philadelphia NAA

Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
Organic Chemical Transport	0.6	0.8
Inorganic Chemical Storage		0.0
WASTE DISPOSAL & RECYCLING	**22.0**	**46.5**
Incineration	1.6	6.4
Open Burning	0.2	13.5
residential		8.9
other	0.2	4.6
POTW	7.8	9.9
Industrial Waste Water		3.5
TSDF	12.3	12.3
Landfills	0.2	0.8
Other		0.1
HIGHWAY VEHICLES	**187.9**	**366.5**
Light-Duty Gas Vehicles & Motorcycles	167.7	281.0
light-duty gas vehicles	161.0	272.0
motorcycles	6.7	9.0
Light-Duty Gas Trucks	14.7	64.0
ldgt1	8.3	36.0
ldgt2	6.4	28.1
Heavy-Duty Gas Vehicles	2.4	12.3
Diesels	3.0	9.2
hddv	1.4	7.1
lddt	0.2	0.2
lddv	1.4	1.8
OFF-HIGHWAY	**88.1**	**156.6**
Non-Road Gasoline	69.9	123.2
recreational	1.0	2.9
construction	1.8	2.7
industrial	8.1	10.2
lawn & garden	46.9	72.2
farm	0.2	0.5
light commercial		3.8
logging		0.3
recreational marine vessels	11.9	30.6
other		0.1
Non-Road Diesel	9.8	16.0
construction	6.6	10.0
industrial	1.5	1.8
lawn & garden	0.0	0.1
farm	1.7	4.1
light commercial		0.0
Aircraft	7.2	12.8
Marine Vessels		2.2
diesel		1.5
residual oil		0.7
Railroads	1.1	2.3

1990 Ozone Season Daily VOLATILE ORGANIC COMPOUND Emissions for the Philadelphia NAA

Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
MISCELLANEOUS	2.3	6.3
Other Combustion	2.3	4.4
structural fires	2.3	3.3
slash/prescribed burning		0.0
forest wildfires	0.0	1.0
cigarette smoke		0.1
Catastrophic/Accidental Releases		1.8
Health Services		0.0
TOTAL	612.0	1145.7

1990 osd emissions from the Philadelphia NAA
Major Source Category Summary

Pollutant	Source	PA counties	All Counties
voc	area	274.1	499.1
	point	150.0	280.1
	mobile	187.9	366.5
	total	**612.0**	**1145.7**
nox	area	122.9	212.4
	point	170.0	572.7
	mobile	158.3	305.3
	total	**451.2**	**1090.4**
co	area	755.6	1288.9
	point	70.6	167.2
	mobile	1710.8	2971.9
	total	**2537.0**	**4428.0**

1990 Ozone Season Daily CARBON MONOXIDE Emissions for the Philadelphia NAA
Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
FUEL COMB. ELEC. UTIL.	**6.1**	**28.3**
Coal	1.5	10.9
Oil	3.1	6.3
Gas	0.4	1.4
Other	0.0	0.3
Internal Combustion	1.1	9.4
FUEL COMB. INDUSTRIAL	**9.3**	**37.6**
Coal	0.1	0.4
Oil	0.9	2.3
Gas	5.2	31.4
Other	0.0	0.2
Internal Combustion	3.1	3.2
FUEL COMB. OTHER	**5.6**	**12.3**
Commercial/Institutional Coal	0.0	0.0
Commercial/Institutional Oil	2.6	3.1
Commercial/Institutional Gas	2.7	3.7
Misc. Fuel Comb. (Except Residential)	0.2	0.2
Residential Wood		4.1
woodstoves		1.6
other		2.5
Residential Other	0.3	1.1
CHEMICAL & ALLIED PRODUCT MFG	**0.0**	**30.4**
Organic Chemical Mfg		2.5
Inorganic Chemical Mfg	0.0	27.5
pigments; TiO2 chloride process: reactor		27.5
other	0.0	0.0
Polymer & Resin Mfg		0.0
Pharmaceutical Mfg		0.1
Other Chemical Mfg		0.3
METALS PROCESSING	**36.0**	**36.0**
Ferrous Metals Processing	36.0	36.0
gray iron cupola	12.7	12.7
other	23.3	23.3
Metals Processing NEC		0.0
PETROLEUM & RELATED INDUSTRIES	**17.9**	**34.3**
Petroleum Refineries & Related Industri	17.7	34.0
fcc units	16.7	33.0
other	1.0	1.0
Asphalt Manufacturing	0.2	0.3
OTHER INDUSTRIAL PROCESSES	**0.6**	**0.6**
Agriculture, Food, & Kindred Products		0.0
Mineral Products	0.6	0.6
Miscellaneous Industrial Processes		0.0
SOLVENT UTILIZATION	**0.0**	**0.0**
Graphic Arts	0.0	0.0
Surface Coating	0.0	0.0
Other Industrial	0.0	0.0

1990 Ozone Season Daily CARBON MONOXIDE Emissions for the Philadelphia NAA
Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
WASTE DISPOSAL & RECYCLING	**6.5**	**65.4**
Incineration	5.3	6.6
industrial	0.0	0.5
commmercial/institutional	0.0	0.9
other	5.2	5.3
Open Burning	1.2	58.8
residential		25.3
other	1.2	33.5
HIGHWAY VEHICLES	**1710.8**	**2971.9**
Light-Duty Gas Vehicles & Motorcycles	1503.8	2284.5
light-duty gas vehicles	1479.3	2254.5
motorcycles	24.5	30.0
Light-Duty Gas Trucks	161.6	503.3
ldgt1	95.0	294.1
ldgt2	66.6	209.3
Heavy-Duty Gas Vehicles	35.0	147.2
Diesels	10.3	36.9
hddv	6.4	32.0
lddt	0.3	0.5
lddv	3.6	4.4
OFF-HIGHWAY	**731.6**	**1186.4**
Non-Road Gasoline	657.4	1068.0
recreational		6.6
construction	21.3	32.3
industrial	170.9	202.1
lawn & garden	428.1	652.7
farm	2.2	5.1
light commercial		63.3
logging		0.8
recreational marine vessels	34.9	104.9
other		0.1
Non-Road Diesel	44.8	71.7
construction	30.7	46.7
industrial	7.2	8.5
lawn & garden	0.2	0.3
farm	6.7	16.0
light commercial		0.3
Aircraft	27.1	38.0
Marine Vessels		4.8
diesel		3.4
residual oil		1.3
Railroads	2.3	4.0
MISCELLANEOUS	**12.6**	**24.9**
Other Combustion	12.6	24.9
structural fires	12.5	18.2
slash/prescribed burning		0.7
forest wildfires	0.1	5.8
cigarette smoke		0.2

1990 Ozone Season Daily CARBON MONOXIDE Emissions for the Philadelphia NAA
Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
TOTAL	2537.0	4428.0

1990 Ozone Season Daily OXIDES OF NITROGEN Emissions for the Philadelphia NAA
Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
FUEL COMB. ELEC. UTIL.	**74.2**	**367.4**
Coal	38.8	215.2
bituminous	28.6	205.0
anthracite & lignite	10.2	10.2
Oil	25.6	60.5
residual	24.5	52.9
distillate	1.1	7.6
Gas	5.1	17.6
natural	2.1	10.3
process	3.0	7.4
Other	0.4	9.9
Internal Combustion	4.4	64.2
FUEL COMB. INDUSTRIAL	**76.0**	**176.9**
Coal	4.8	9.5
bituminous	4.5	5.9
anthracite & lignite	0.3	0.3
other		3.4
Oil	10.3	23.4
residual	5.4	14.0
distillate	0.3	3.1
other	4.6	6.4
Gas	42.8	123.7
natural	24.7	66.6
process	18.1	57.1
Other	0.7	2.0
liquid waste	0.7	0.8
other		1.2
Internal Combustion	17.4	18.2
FUEL COMB. OTHER	**26.8**	**38.3**
Commercial/Institutional Coal	0.8	0.8
Commercial/Institutional Oil	10.9	14.1
Commercial/Institutional Gas	13.6	18.5
Misc. Fuel Comb. (Except Residential)	0.7	1.0
Residential Wood		0.0
Residential Other	0.9	3.8
distillate oil		1.0
natural gas		1.7
other	0.9	1.1
CHEMICAL & ALLIED PRODUCT MFG	**0.1**	**10.9**
Organic Chemical Mfg		0.1
Inorganic Chemical Mfg	0.1	0.3
Polymer & Resin Mfg	0.0	0.0
Agricultural Chemical Mfg		0.0
Paint, Varnish, Lacquer, Enamel Mfg		0.0
Other Chemical Mfg		10.5

1990 Ozone Season Daily OXIDES OF NITROGEN Emissions for the Philadelphia NAA Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
METALS PROCESSING	**1.5**	**1.6**
Non-Ferrous Metals Processing	0.0	0.0
Ferrous Metals Processing	1.5	1.5
Metals Processing NEC		0.1
PETROLEUM & RELATED INDUSTRIES	**10.0**	**10.8**
Petroleum Refineries & Related Industri	9.8	10.5
Asphalt Manufacturing	0.2	0.3
OTHER INDUSTRIAL PROCESSES	**2.8**	**4.3**
Agriculture, Food, & Kindred Products	0.0	0.0
Mineral Products	2.8	2.8
glass mfg	1.8	1.8
other	1.0	1.0
Machinery Products	0.0	0.1
Miscellaneous Industrial Processes		1.4
SOLVENT UTILIZATION	**0.0**	**0.4**
Surface Coating	0.0	0.4
Other Industrial	0.0	0.0
STORAGE & TRANSPORT		**0.0**
Organic Chemical Storage		0.0
WASTE DISPOSAL & RECYCLING	**1.7**	**4.7**
Incineration	1.6	1.9
Open Burning	0.1	2.8
HIGHWAY VEHICLES	**158.3**	**305.3**
Light-Duty Gas Vehicles & Motorcycles	122.9	196.2
light-duty gas vehicles	122.0	195.1
motorcycles	0.9	1.1
Light-Duty Gas Trucks	12.4	40.7
ldgt1	7.1	24.2
ldgt2	5.3	16.5
Heavy-Duty Gas Vehicles	2.2	7.4
Diesels	20.8	61.1
hddv	15.4	54.6
lddt	0.5	0.7
lddv	4.9	5.8

1990 Ozone Season Daily OXIDES OF NITROGEN Emissions for the Philadelphia NAA
Tier 3 Source Category Summary

Source Category	Pennsylvania Counties	All Counties
OFF-HIGHWAY	**99.5**	**169.3**
Non-Road Gasoline	9.0	13.1
recreational	3.5	3.5
construction	0.2	0.2
industrial	4.1	6.1
lawn & garden	0.5	0.7
farm	0.0	0.0
light commercial		0.0
logging		0.0
recreational marine vessels	0.7	2.1
other		0.4
Non-Road Diesel	66.7	111.3
construction	53.1	81.9
industrial	6.4	9.4
lawn & garden	0.3	0.5
farm	6.9	19.0
light commercial		0.4
Aircraft	8.2	9.7
Marine Vessels		13.4
diesel		9.2
residual oil		4.2
Railroads	15.6	21.8
MISCELLANEOUS	**0.3**	**0.6**
Other Combustion	0.3	0.6
TOTAL	**451.2**	**1090.4**

SOUTHEAST PENNSYLVANIA OZONE STAKEHOLDER WORKING GROUP
Draft Meeting Summary
Center City, Philadelphia June 20 & 21

Day 1 Morning Session:

I. Review of May 30 & 31 Meeting Summary, Schedule and Announcements:

The June Stakeholders meeting opened with revision and approval of the May meeting summary. The Data Advisory Committee (DAC) gave a progress report on their efforts to provide the Stakeholders with a single set of emission inventory numbers. These should be ready for the July 8 and 9 meeting.

Joe Minott and Nancy Parks announced the June 18 filing of legal action by the Clean Air Council and the Sierra Club against the EPA to compel enforcement of the Federal Clean Air Act requirements. The stakeholders discussed the implications of the lawsuits on their deliberations.

II. Overview of Relevant Current Events: Jim Rue, Deputy Secretary, DEP.

Jim Rue provided a brief review of relevant current events, including an announcement that he will be attending the upcoming Federal Energy Regulatory Commission (FERC) meetings in Virginia. He also mentioned that the Department of Energy now supports the EPA's position on a national NOx emission standard--a 2/3 reduction to be obtained by a cap and trade program. He said that recent movement at the federal level has been toward a less voluntary Ozone Transport Assessment Group (OTAG) if voluntary measures fail. He also mentioned recent efforts by the EPA on the development of regional haze standards.

III. Control Measure Evaluation Criteria: Jim Wilson, E.H. Pechan & Associates

Jim Wilson presented a list of potential criteria for evaluating and comparing different ozone control measures for consideration by the Stakeholders. Stakeholders then broke into small groups to discuss and expand the list. (see attached list)

From the large group discussion that followed, Stakeholders reached consensus on the evaluation criteria with the addition of some criteria for the location of emission sources (i.e., the 5 county non-attainment area versus statewide, or outside the state).

Considerable debate occurred over ozone transport issues. The group agreed that, although achieving the health based standard required dealing on some level with these transport issues, the focus of the Stakeholders should be kept to the five county non-attainment area to ensure that the group completes its mandate. Wick Havens made the point that for modeling purposes Stakeholders can make choices about assumptions in the model - such as attainment at the boundary - and focus on attainment strategies within the five county area.

Out of this discussion, the stakeholders agreed to recommit to the mandate set forth in the operating agreement and to focus on building consensus for attainment strategies.

Afternoon Session:

IV. DEP's Attainment Recap: Wick Havens, DEP.

Wick Havens presented design values for the region's ozone monitoring sites, stating that the design values are high throughout eastern Pennsylvania. He said that monitored data moves in synch-when one monitor shows an exceedance, adjacent monitors also tend to record high readings. He showed that ozone design values for the Philadelphia area from 1980-1994 closely match recorded values in the rest of the region during the same period. These trends also mirror regional weather patterns.

V. Alternative Approaches to Modeling and Attainment: S.T. Rao, NY State DEP.

S.T. Rao gave a presentation on ozone transport and the non-attainment problem. He stated that historically, ozone reduction efforts have focused on urban areas, noting that ozone is not a local problem.

Several of the problems he believes are inherent to current approaches to reduce ground level ozone are that attainment strategies focus only on reducing peak values, and that these peak values themselves are statistically unstable. Other problems he noted were that prescriptive controls depend on grid-based attainment demonstration which has a bias toward episodic modeling as well as having a bias on VOC reductions and a focus on urban rather than regional solutions. He said it is difficult to assess the effectiveness of regulatory initiatives in improving air quality because of the weather. A big step toward overcoming these problems, he said, would be to pursue controls that reduce the baseline ozone levels rather than focusing on the peak values.

He said ozone transport is one of the important factors that need to be dealt with because ozone is by nature a regional phenomenon. His research, based on observed data from 1980 to 1992 raw ozone data, shows there is a large reservoir of ozone over the eastern U.S.; local precursor emissions are superimposed on this reservoir.

He suggested that the stakeholders consider the following points in formulating attainment strategies: the baseline required for attainment needs to be reduced 10% to 30%; NOx controls are twice as effective as VOC controls. Evidence also suggests that decreasing VOC's by 25% and NOx by 50% in the entire OTAG region would produce attainment in the Eastern United States.

He concluded with a caution that because models are very sensitive to boundary conditions, they should not be used on a pass/fail basis but only as directional and relative analysis to indicate if attainment measures are moving emissions in the proper direction.

Day 2
Morning Session:

I. Transportation and Land Use Planning, Rich Bickel, SEPTA.

Rich Bickel presented an overview of regional transportation patterns and SEPTA's future planning. He presented demographic projections showing the city of Philadelphia losing 4% of its population while the surrounding suburbs are increasing by 12%. This

regional trend mirrors the decentralized pattern of growth and development throughout the country.

He said that traditional commuting patterns are increasingly being replaced by inter-suburban commenting patterns, noting that the suburban market is difficult to serve for SEPTA because of scattered land use patterns, low population density, and sprawling development. Further compounding the problem he said is site design which is not friendly to mass transit and gas that is cheap and plentiful, encouraging the use of private cars.

He said that SEPTA's principle difficulties have been on the capitol side, where 90% of its expenditures presently go toward maintaining existing, aging infrastructure. Additionally, SEPTA is subject to many unfunded federal mandates which further strain limited funds. As a result, future initiatives are limited to short light-rail extensions, as well as a cross-county metro, northeast metro and a schuylkill valley metro.

II. On Board Diagnostics, David Lee, ASE.

David Lee passed out information on on-board diagnostics (OBD) and led a Stakeholder discussion on remote sensing.

III. Summary of Potential Control Measures: Jim Wilson, E.H. Pechan & Associates.

Jim Wilson reviewed and explained the list of potential control strategies for Stakeholders to consider before they went into small groups to discuss additions, changes or other amendments. He presented control measures by source category, each further divided into strategies for VOC and NOx reductions.

IV. Discussion of Stakeholder amendments to Attainment Strategies

Stakeholders went through the list attainment strategies, adding several to the initial list presented by Jim Wilson.

Afternoon Session:

Presentation, Emission Trading: Jim Rue, DEP & Joe Goffman, Environmental Defense Fund.

Jim Rue gave a brief overview of the evolution of emission cap and trade programs wherein emission credits have become a currency which can be bought and sold, providing market based incentives for companies to find reductions. He said the advantage of this approach is that the public sector sets the emission levels and market forces determine the most efficient course to achieve those reductions.

Joe Goffman then presented the mechanics of emission cap and trade programs, stating that society has tried to find the right balance of reductions so far by using relatively crude measures. He said that the next generation of reductions will be much more difficult to achieve. Discussing the assets of trading programs, he said that the programs are highly effective because they stimulate the kind of innovation needed for

the next level of attainment strategies, as well as providing for market place financing of these strategies. Additionally, he said emissions trading gives decision making power to the private sector, in return the public gets greater reductions more effectively.

He went on to present the key policy elements of the Illinois cap and trade program, these include seasonal limits on actual emissions, banking of credit limits, inter regional and inter pollutant trading. He concluded with proposals for using Emissions trading as a tool for solving I/M problems.

From the Stakeholders discussion that followed, Tom Maslany expressed concerns over the idea of inter temporal trading of emissions. He also stated that while emission credits coming into the bank are good, those that flow out are potentially harmful.

Jim Rue acknowledged the potential problems with trading programs and stated market based systems are often more effective than site-specific controls. He also said that politically it is often easier to get more reductions through market mechanisms than through traditional command and control strategies. In concluding he said that this approach is an additional tool to be used in conjunction with others to help us reach attainment goals.

VI. Gas Cap Replacement Program: Tony Ippolito, Sun Oil Co.

Tony Ippolito gave a brief overview of the kickoff on June 26 of Sun oil Companies gas cap replacement program which aims to send out 25,000 new gas caps to owners of 1988 and older car in the Philadelphia and Pittsburgh areas. He said the program will reduce an estimated 300 tons of pollutants during the ozone season.

VII. Public Involvement Committee Progress Report

Mike Hughes provided an update of the Public Involvement Committee progress, these include agreement on the working assumptions that waiting to do public outreach until Stakeholder recommendations is a recipe for failure, and that the public will pay greater attention to an issues immediately after an ozone episode. Agreement was reached that Clark Rupert at DEP would serve as the key contact for general information. Additionally, it was decided that any statement to the public or media be approved by the Stakeholders as group prior to their release.

VIII. Meeting Evaluation and Next Steps:

The June 20 & 21 Stakeholder meeting concluded with suggestions to improve subsequent meetings. Suggested areas for improvement included a larger room and one with less noise. It was also requested that Stakeholders receive handouts and other literature prior to the meeting for opportunity to read and review before relevant presentations. Finally, concern was expressed again over the pending litigation initiated by the Clean Air Council and The Sierra Club against the EPA and the potential for this to color the Stakeholder proceedings. Complemented areas from the Stakeholders included S.T. Rao's presentation and the facilitation.

The next meeting will be July 8 & 9 at the Holiday Inn, 4th and Arch, center city Philadelphia.

Criteria for Evaluating Ozone Control Measures (Revised 6/20)
COST
Capital Cost Operating and Maintenance Cost Annualized Direct Costs Administrative Costs/Issues
EFFICIENCY
Control Efficiency-% reduction from uncontrolled levels Applicability-how many sources, their size Emission Reductions by Pollutant-estimated reductions-VOC only, NOx only, VOC and NOx combined Permanence Measurable Availability
COST-EFFECTIVENESS -cost/ton for each precursor and for both precursors combined, over the lifetime of the control
IMPLEMENTABILITY
Enforcement Ease of Determining Compliance Implementation Ease Timing of Reductions Publicly Acceptable Politically Acceptable Consensual Voluntary Who Pays-Fairness Location
SECONDARY EFFECTS
Secondary Pollutant Benefits-CO,HAPS,etc Secondary Benefits-materials,agricultural,tourism,land use,etc Secondary Costs